

DISHA PATEL
SY IT
42
EXP 8:

ARITHMETIC OPERATORS:

```
1 num1=24
2 num2=2
3
4 add=$((num1 + num2))
5 echo "Addition: $add"
6
7 sub=$((num1 - num2))
8 echo "Subtraction: $sub"
9
10 mul=$((num1 * num2))
11 echo "Multiplication: $mul"
12
13 div=$((num1 / num2))
14 echo "Division: $div"
15
16 mod=$((num1 % num2))
17 echo "Modulus: $mod"
18 |
```

```
dl403@dl403-HP-ProDesk-400-G7-Microtower-PC:~/Desktop$ ./script.sh
Addition: 26
Subtraction: 22
Multiplication: 48
Division: 12
Modulus: 0
dl403@dl403-HP-ProDesk-400-G7-Microtower-PC:~/Desktop$
```

RELATIONAL OPERATORS:

```

1 num1=24
2 num2=2
3
4 if [ $num1 -eq $num2 ]; then
5     echo "Equal"
6 else
7     echo "Not Equal"
8 fi
9
10 if [ $num1 -ne $num2 ]; then
11     echo "Not Equal"
12 else
13     echo "Equal"
14 fi
15
16 if [ $num1 -lt $num2 ]; then
17     echo "$num1 is less than $num2"
18 else
19     echo "$num1 is not less than $num2"
20 fi
21
22 if [ $num1 -gt $num2 ]; then
23     echo "$num1 is greater than $num2"
24 else
25     echo "$num1 is not greater than $num2"
26 fi
27
28 if [ $num1 -le $num2 ]; then
29     echo "$num1 is less than or equal to $num2"
30 else
31     echo "$num1 is not less than or equal to $num2"
32 fi
33
34 if [ $num1 -ge $num2 ]; then
35     echo "$num1 is greater than or equal to $num2"
36 else
37     echo "$num1 is not greater than or equal to $num2"
38 fi
39

```

```

dl403@dl403-HP-ProDesk-400-G7-Microtower-PC:~/Desktop$ gedit script.sh
dl403@dl403-HP-ProDesk-400-G7-Microtower-PC:~/Desktop$ ./script.sh
Not Equal
Not Equal
24 is not less than 2
24 is greater than 2
24 is not less than or equal to 2
24 is greater than or equal to 2
dl403@dl403-HP-ProDesk-400-G7-Microtower-PC:~/Desktop$

```

STRING OPERATORS:

```

1 str1="hello"
2 str2="world"
3
4 if [ $str1 = $str2 ]; then
5     echo "Strings are equal"
6 else
7     echo "Strings are not equal"
8 fi
9
10 if [ -z $str1 ]; then
11     echo "String is empty"
12 else
13     echo "String is not empty"
14 fi
15
16 if [ -n $str2 ]; then
17     echo "String is not empty"
18 else
19     echo "String is empty"
20 fi
21

```

```

dl403@dl403-HP-ProDesk-400-G7-Microtower-PC:~/Desktop$ ./script.sh
Strings are not equal
String is not empty
String is not empty
dl403@dl403-HP-ProDesk-400-G7-Microtower-PC:~/Desktop$

```

BOOLEAN OPERATORS:

```

1
2 a=true
3 b=false
4
5 if [ $a -a $b ]; then
6     echo "AND condition satisfied"
7 else
8     echo "AND condition not satisfied"
9 fi
10
11 if [ $a -o $b ]; then
12     echo "OR condition satisfied"
13 else
14     echo "OR condition not satisfied"
15 fi
16
17 if [ ! $b ]; then
18     echo "NOT condition satisfied"
19 else
20     echo "NOT condition not satisfied"
21 fi
22

```

```

dl403@dl403-HP-ProDesk-400-G7-Microtower-PC:~/Desktop$ gedit script.sh
dl403@dl403-HP-ProDesk-400-G7-Microtower-PC:~/Desktop$ ./script.sh
AND condition satisfied
OR condition satisfied
NOT condition not satisfied
dl403@dl403-HP-ProDesk-400-G7-Microtower-PC:~/Desktop$

```

FILE TEST OPERATORS:

```

1
2 file="DISHA.TXT"
3
4 if [ -e $file ]; then
5     echo "$file exists"
6 else
7     echo "$file does not exist"
8 fi
9
10 if [ -f $file ]; then
11     echo "$file is a regular file"
12 else
13     echo "$file is not a regular file"
14 fi
15
16 if [ -d $file ]; then
17     echo "$file is a directory"
18 else
19     echo "$file is not a directory"
20 fi
21

```

```
dl403@dl403-HP-ProDesk-400-G7-Microtower-PC:~/Desktop$ ./script.sh
DISHA.TXT exists
DISHA.TXT is a regular file
DISHA.TXT is not a directory
dl403@dl403-HP-ProDesk-400-G7-Microtower-PC:~/Desktop$ gedit script.sh
```